Amendments to the Drawings:

The attached replacement sheet of drawings includes changes to Fig. 1A through 1D and replaces the original sheet including Fig. 1A, 1B, 1C, 1D & 2A.

Figures 1A through 1D have been labeled "prior art".

Attachments following last page of this Amendment:

Replacement Sheet (1 page)

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Initially, Examiner Harris and Examiner Gimie are both thanked for the interview which was conducted on March 28, 2006. The insights into the rejection, and the helpfulness during that interview, were greatly appreciated.

In response to the rejection and the discussion during the interview, it was appreciated by the undersigned that the patent office is taking an interpretation of these references which is very different than the intended scope of these claims. In response, the claims are amended herewith, and in a way to completely distinguish over the cited prior art.

The claims stand rejected under 35 USC §103 as being obvious over Brown et al. in view of Taylor. Taylor is cited apparently simply to show that fuel reformers can be used in engines.

Brown et al. shows a fuel injector which injects fuel into a chamber, and also pulls air into that chamber. Note that the fuel injector 33 in Brown et al. sprays fuel directly in the direction shown by arrow 42. Therefore, Brown et al.'s "reaction region", the region which receives fuel from the fuel injector, is actually the area 6 in Brown et al. Brown, et al. also calls this a reaction chamber, see column 4 line 48.

During the interview, the examiner made the point that some fuel would travel backwards after being injected into Brown et al.'s reaction chamber 6. The claims have been limited to obviate this interpretation of Brown et al. As amended, the claims define structure which is completely different from Brown et al. in view of Taylor.

Claim 1 defines that the reaction rod is cylindrical in shape and is positioned completely in the reaction region. The reaction rod has a convex end in the reaction region that faces to receive fuel from the injector. The reaction rod also has a concave end and a cylindrical body formed by walls that extend between the concave end and the convex end. According to claim 1, fuel from the injector is directed to flow between the walls of the reaction rod and the inner walls of the conduit in a direction from the convex end to the concave end. According to Claim 1, the reaction rod reduces an inner surface area of the conduit for the fuel flow in the area of the reaction rod.

The reduction of the surface area in this location is an important part of the claimed subject matter. Moreover, there is nowhere in Brown et al. where a corresponding operation could occur. Even assuming that the fuel injector rod could somehow be considered the same as the reaction rod, it does not meet the claim limitations of being positioned completely in the reaction region, having both a convex and a concave end, and having fuel

which is directed in a direction from the convex end to the concave end, as claimed. Brown et al. does not teach any concave end at all. In fact, the "end" of the reaction rod is not actually in any area which could receive a flow of fuel. Naturally, the area which might receive fuel does in fact end, but it certainly does not end at a concave ending, as required by Claim 1.

Claim 1 should therefore be allowable for these reasons, along with the claims which depend therefrom.

Claim 15 has been amended in analogous ways, and should hence be allowable for analogous reasons to those discussed above.

Claim 22 defines a different combination. According to Claim 22, the reaction rod is positioned completely in the reaction region, and is movable along the axis within the reaction region. This means that the rod can move back and forth within the reaction region. Such is nowhere taught or suggested by Brown et al. view of Taylor. In fact, Brown et al.'s "rod" is actually a fuel injector, and it makes no sense to consider that the fuel injector could move back and forth in the reaction region as claimed. Claim 22 also describes that the reaction rod has a first fuel receiving and that receives fuel from the injector and a second end opposite the fuel receiving and receiving fuel that has passed the first end.

Claim 22 also defines a first stop in a location that allows the reaction rod to move along the axis but prevents the reaction rod from moving along the axis beyond the position of the first stop. Claim 22 also defines a second stop in a location that prevents the reaction rod from moving along the axis beyond the position of the second stop.

The rejection interprets the bracket which holds the fuel injector in place as being a stop. These amendments obviate this interpretation by defining that the stop allows the reaction rod to move along the axis, but prevents it from moving beyond a position. Nothing in Brown et al. has any equivalent stops, and therefore, each of these claims should be in condition for allowance for these reasons.

Finally, Claim 25 has been amended to recite that the fuel passes the first convex fuel receiving end and then the second concave fuel transmitting end. The fuel which has passed the first and second ends of the rod are sent to the engine. This is nowhere taught or suggested by Brown et al. in view of Taylor. As described above, Brown et al. does not have any rod of any sort which is completely in the combustion chamber as required by the claims. In addition, moreover, Taylor shows no rod with a concave end whatsoever, and with all due respect, it is improper to ignore this limitation and simply call it "obvious". There is simply no teaching or suggestion of a rod

with a concave end in the cited prior art.

The independent claims should be allowable for these reasons. The dependent claims should be allowable for analogous reasons.

The dependent claims should be further allowable. There appears to be no suggestion of the vacuum generator of Claim 6, or the vacuum generator being a Venturi of Claim 7 or the turbopump of Claim 8.

There is no teaching or suggestion of the materials for the fuel transport tube of Claims 11 and 12.

Claim 1 stands rejected under 35 USC §112, second paragraph, as allegedly being indefinite. An "and" has been added to Claim 1.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any

claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant asks that all claims be allowed. Please apply the $60 one month extension of time fee, and any other applicable charges or credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: May 31, 2006

Scott C. Harris
Reg. No. 32,030

Fish & Richardson P.C.
PTO Customer No. 20985
12390 El Camino Real
San Diego, California 92130
(858) 678-5070 telephone
(858) 678-5099 facsimile

10616206.doc